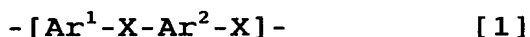


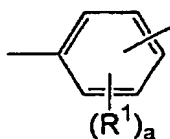
CLAIMS

1. A block copolymer characterized in that said block copolymer has at least one block having an acid group and at least one block having substantially no acid group, one end group of a repeating unit in at least one block of all blocks is oxygen and/or sulfur, and at least one repeating unit of a block having substantially no acid group contains a halogen atom.

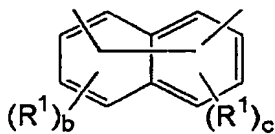
2. The block copolymer according to claim 1, wherein the repeating unit of a block containing a halogen atom is represented by the following general formula [1]:



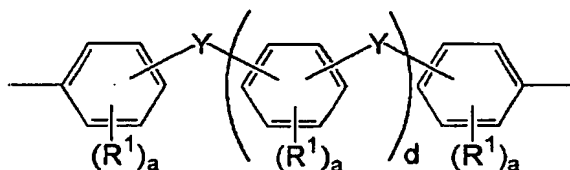
(wherein X represents an oxygen atom or a sulfur atom, and Ar^1 and Ar^2 represent independently a divalent aromatic group represented by the following formula [2], [3] or [4] :



[2]



[3]



[4]

(R^1 represents an alkyl group of a carbon number of 1 to 10, a halogenated alkyl group of a carbon number of 1 to 10, a halogenated aryl group, a hydroxyl group, an acetyl group, a benzoyl group, a nitrile group, a nitro group or a halogen atom, when there are plural R^1 's, they may be the same or different,

or R¹s may be bound together so that the bond constitutes a part of a cyclic structure, a, b and c represent independently an integer of 0 to 4, a sum of b and c is 0 to 6, d represents an integer of 0 to 2, Y represents a direct bond, -O-, -S-, -C(O)-, -SO₂-, -C(R²)₂-, an alkylene group of a carbon number of 1 to 6, a halogenated alkylene group of a carbon number of 1 to 10, an alkylenedioxy group of a carbon number of 1 to 6, or a halogenated alkylenedioxy group of a carbon number of 1 to 10, when there are plural Ys, these may be the same or different, any of R¹ and Y (when there are plural groups, at least one of them) contains a halogen atom, and R²s represent an alkyl group of a carbon number of 1 to 10, or a halogenated alkyl group of a carbon number of 1 to 10, two R²s may be the same or different, or may form a ring)).

3. The block copolymer according to claim 1 or 2, wherein a halogen atom of a block containing a halogen atom is a fluorine atom.

4. The block copolymer according to any one of claims 1 to 3, wherein the acid group is a sulfonic acid group or a sulfonylimide group.

5. A polymer electrolyte comprising a block copolymer according to any one of claims 1 to 4 as an active ingredient.

6. A polymer electrolyte membrane containing a polymer electrolyte according to claim 5.

7. A catalyst composition containing a polymer electrolyte according to claim 5.

8. A fuel cell using a polymer electrolyte membrane according to claim 6.

9. A fuel cell using a catalyst component according to claim 7.